UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,586	12/18/2001	Shannon M. Short	BS01-404	6161

28970 7590 12/20/2004

SHAW PITTMAN
IP GROUP
1650 TYSONS BOULEVARD
SUITE 1300
MCLEAN, VA 22102

EXAMINER	
HAROLD, JEFFEREY F	

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,586	SHORT ET AL.	
	Examiner	Art Unit	
	Jefferey F Harold	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-26 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-26 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Clancy et al (United States Patent 5,802,164), hereinafter referenced as Clancy.

Regarding claim 26, Clancy discloses systems and methods for controlling telephone sound enhancement on a per call bases. In addition, Clancy discloses a method of controlling a speaker volume of a communications device, comprising: providing to a user of the communications device at with the option to allow automatic control of the volume for the entire call and the option to stop the enhancement (i.e., automatic volume control) at any point during the call, which reads on claimed "at least two different options for controlling the speaker volume based on ambient noise"; receiving a selection of one of the at least two different options from the user; and implementing a volume control action that is based on the ambient noise and that corresponds to the option selected by the user to thereby control the speaker volume based on the ambient noise, as disclosed at column 10, line 56 through column 11, line 9.

Regarding claim 27, Clancy discloses everything claimed as applied above (see claim 26), in addition Clancy discloses, wherein the at least two different options comprises use of the capability to end signal enhancement at any point of the telephone call, including after a one time ambient noise sample, which reads on claimed "a one time ambient noise sample to automatically adjust the speaker volume one time for a call" and use of a repetitive ambient noise sample to repetitively adjust the speaker volume for a call, as disclosed at column 10, line 56 through column 11, line 9.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. ***Claims 1-5, and 7-9*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Clancy in view of Alperovich et al. (United States Patent 6,298,247), hereinafter referenced as Alperovich in view of Yamashita (United States Patent 5,615,256).

Regarding **claim 1**, Clancy discloses everything claimed as applied above (see claim 26) Alperovich discloses a method and apparatus for automatic volume control. In addition, Alperovich discloses a method of amplifying the speaker volume on a mobile station (MS), which reads on claimed "method of controlling the speaker volume on a communications device", as disclosed at column 2, lines 31-49 and exhibited in

figure 1, wherein amplifying the speaker reads on "controlling the speaker" and mobile station reads on "communication device", comprising the steps of:

(a) external noise measuring device (ENMD)(102) requests measurement of external noise data, inherently measuring the noise level in the vicinity, of the MS to provide a measurement report of the noise level, which reads on claimed "sampling the ambient noise level in the vicinity of the communication device to detect a first sample noise level", as disclosed at column 3, lines 9-13 and exhibited in figure 3; wherein requests measurement of external noise data reads on "sampling the ambient noise level"; wherein the noise level measured is inherently in the vicinity of the mobile station since the ENMD is located near the microphone or the speaker, thus the noise measured by the ENMD is the noise in the vicinity of the MS; MS reads on "communications device"; and provide a measurement report of the noise level reads on "detect a first sample noise level";

(b) comparing the provided measurement of the external noise data to the subscriber's desired volume control data; which reads on claimed "determining the comparison of the first sample noise level with a threshold level", as disclosed at column 3, lines 11-15 and exhibited in figure 3; wherein the subscriber's desired volume control data reads on "threshold" and external noise data reads on "first sample noise level";

(c) volume control application (120) periodically requests measurements of the external noise data from the ENMD while MS (100) is in a speech call. The ENMD will then provide the measurement report to application (120). Application (120) then obtains the subscriber's desired volume control data from the database (122) in memory

module (MM) (108) and compares the measured noise data to the desired volume and based on the comparison calculation the application (120) sends a control signal request to volume control (VC) device (104) to increase or decrease the volume of the MS (100); VC (104) then translates the request to a hardware operation to adjust the volume of speaker (112), and inherently maintains the volume; which reads on claimed "automatically adjusting the volume of the speaker to a first volume level sufficient to overcome the first sample noise level and maintaining the volume of the speaker at the first volume level" as disclosed at column 3, lines 8-20 and exhibited in figure 3; wherein the volume control application periodically requesting reads on "automatically"; adjusting the volume of speaker (112) reads on "adjusting the volume of the speaker"; the increase or decrease of the volume of MS (100) reads on first volume level; external noise data reads on "first sample noise level"; the volume is inherently maintaining based on that one of ordinary skill in the art would have recognized that during the period between the iterations of comparison between the sampled noise environment and the threshold, the adjusted volume of the speaker will be maintained until the next iteration of the comparison process is performed.

(d) periodically requesting measurements of the external noise inherently in the vicinity of the MS (100) data from the ENMD while the MS is in a speech call to provide the measurement report, which reads on the claimed "resampling the ambient noise level in the vicinity of the communications device to detect a second sample noise level", as disclosed at column 3, lines 8-27; wherein periodically requesting reads on "resampling"; external noise data reads on "ambient noise level"; wherein the noise level

measured is inherently in the vicinity of the mobile station since the ENMD is located near the microphone or the speaker, thus the noise measured by the ENMD is the noise in the vicinity of the MS; MS reads on "communications device"; and measurement report reads on "second sample noise level".

(e) comparing the provided measurement of the external noise data to the subscriber's desired volume control data; which reads on claimed "determining the comparison of the second sample noise level with a threshold level", as disclosed at column 3, lines 11-15 and exhibited in figure 3; wherein the subscriber's desired volume control data reads on "threshold" and provided external noise data reads on "second sample noise level";

(f) volume control application (120) periodically requests measurements of the external noise data from the ENMD while MS (100) is in a speech call. The ENMD will then provide the measurement report to application (120). Application (120) then obtains the subscriber's desired volume control data from the database (122) in memory module (MM) (108) and compares the measured noise data to the desired volume and based on the comparison calculation the application (120) sends a control signal request to volume control (VC) device (104) to increase or decrease the volume of the MS (100); VC (104) then translates the request to a hardware operation to adjust the volume of speaker (112), and inherently maintains the volume; which reads on claimed "automatically adjusting the volume of the speaker to a second volume level sufficient to overcome the second sample noise level and maintaining the volume of the speaker at the second volume level" as disclosed at column 3, lines 8-20 and exhibited in figure 3;

wherein the volume control application periodically requesting reads on "automatically"; adjusting the volume of speaker (112) reads on "adjusting the volume of the speaker"; the increase or decrease of the volume of MS (100) reads on second volume level; external noise data reads on second sample noise level; the volume is inherently maintaining based on that one of ordinary skill in the art would have recognized that during the period between the iterations of comparison between the sampled noise environment and the threshold, the adjusted volume of the speaker will be maintained until the next iteration of the comparison process is performed; however, Alperovich fails to disclose determining greater than a threshold. However the examiner maintains that it was well known in the art for determining greater than a threshold, as taught by Yamashita.

In a similar field of endeavor Yamashita discloses a device and method for automatically controlling sound volume in a communication apparatus. In addition, Yamashita discloses the a level detector that provide an indication of the signal level of the microphone input signal and is compared to the reference noise level to determine whether the signal level is greater than the reference noise set level, which reads on the claimed "determining greater than a threshold" as disclosed at column 4, lines 3-8 and exhibited in figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of automatic volume control of Alperovich by specifically providing a step of determining greater than a threshold, as

taught by Yamashita, for the purpose of providing indication as to the results of the comparison.

Regarding **claim 2**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 1), in addition Alperovich discloses mobile station (100), which reads on the claimed "wherein the communication device comprises a mobile telephone", as disclosed at column 2, lines 31-37 and exhibited in figure 1.

Regarding **claim 3**, Alperovich and Yamashita discloses everything claimed as applied above (see claim 1), in addition Alperovich discloses wherein the subscriber makes a manual adjustment to the volume and the external noise is measured. These two settings are entered into the database (122) as a preferred volume level for the receiving signal, which reads on the claimed "selecting an initial speaker volume level", as disclosed at column 2, line 66 through column 3, line 6; wherein preferred volume level reads on initial speaker volume level".

Regarding **claim 4**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 1), in addition Alperovich discloses inherently enabling step (a) – (f) via the on/off selector of the mobile station (100), wherein every mobile telephone has the capability to be turned on and off. The invention described in Alperovich is enabled when the mobile telephone is turned on which reads on claimed "enabling steps (a) – (f) via a button associated with the communication device"; wherein the On/Off button reads on "button" and mobile station (100) reads on "communication device".

Regarding **claim 5**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 1), in addition Alperovich discloses periodically requesting measurements of the external noise data from ENMD (102) while the MS (100) is in a speech call, ENMD (102) will then provide the measurement report application (120) to adjust the volume of the speaker 112; which reads on claimed "repeating steps (d) – (f)", as disclosed at column 3, lines 9-20 and exhibited in figure 3.

Regarding **claim 7**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 1), in addition Alperovich discloses wherein the volume control application (120) sends a request to volume control (104) to increase or decrease the volume of MS (100), this request is translated into to a request for the hardware operation to adjust the volume of speaker (112); which reads on claimed "step (f) comprises one of increasing and decreasing speaker volume", as disclosed at column 3, lines 16-20 and exhibited in figure 3.

Regarding **claim 8**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 1), in addition Alperovich discloses wherein ENMD (102) receives external noise from a separate microphone (114), which reads on claimed "ambient noise sampling is accomplished via a microphone", as disclosed at column 2, lines 41-42 and exhibited in figure 1; wherein external noise reads on "ambient noise" and microphone (114) reads on "microphone".

Regarding **claim 9**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 1), in addition Alperovich discloses wherein ENMD (102) receives external noise from a separate microphone (114), which reads on claimed

"ambient noise sampling is accomplished via a microphone other than a microphone used for voice communication", as disclosed at column 2, lines 41-44 and exhibited in figure 1; wherein external noise reads on "ambient noise" and separate microphone (114) reads on "microphone other than a microphone used for voice communication".

2. ***Claim 6*** is rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich, in view of Yamashita, further in view of well known prior art (MPEP 2144.03).

Regarding **claim 6**, Alperovich and Yamashita, the combination disclose everything claimed, as applied above, (see claim 1), in addition the combination discloses inherently delaying the time for repeating step (d) after step (f), wherein the delay is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that the there is an amount of time required for processing of the noise data and the inherent time would have been present for the purpose of adjusting the volume of the speaker, however, the combination fails to disclose a predetermined amount of time. However, the examiner takes official notice of the fact that it was well known in the art to provide a predetermined amount of time.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination by specifically providing a predetermined amount of time, for the purpose of reducing the number of computations performed by the processor.

3. ***Claim 11-15*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich in view of well known prior art (MPEP 2144.03), further in view of Clancy.

Regarding **claim 11**, Alperovich discloses a method for automatic volume control of a speaker in response to external noise, which reads on claimed "compensating the volume of a speaker in response to ambient noise", as disclosed at column 3, line 7-20 and exhibited in figure 3; wherein automatic volume control reads on compensating the volume of a speaker reads on "compensating the volume of a speaker" and external noise reads on "ambient noise", the method comprising the steps of:

(a) wherein the subscriber makes a manual adjustment to the volume and the external noise is measured. These two settings are entered into the database (122) as a preferred volume level for the receiving signal, which reads on the claimed "selecting an initial speaker volume level", as disclosed at column 2, line 66 through column 3, line 6; wherein preferred volume level reads on initial speaker volume level",

(b) wherein the external noise is measured, which reads on claimed "subsequently sampling a non-zero level of ambient noise", as disclosed at column 3, lines 9-12; wherein measured reads on "sampling", external noise reads on "non-zero-level of ambient noise".

(c) volume control application (120) periodically requests measurements of the external noise data from the ENMD while MS (100) is in a speech call. The ENMD will then provide the measurement report to application (120). Application (120) then obtains the subscriber's desired volume control data from the database (122) in memory module (MM) (108) and compares the measured noise data to the desired volume and

based on the comparison calculation the application (120) sends a control signal request to volume control (VC) device (104) to inherently increase the volume of the MS (100); VC (104) then translates the request to a hardware operation to adjust the volume of speaker (112) accordingly; which reads on claimed "automatically increasing the volume of the speaker in response to the sampled non-zero level of ambient noise from the initial volume level to a level sufficient to overcome the sampled non-zero level of ambient noise" as disclosed at column 3, lines 8-20 and exhibited in figure 3; wherein the volume control application periodically requesting reads on "automatically"; the volume of the speaker (112) reads on "adjusting the volume of the speaker"; external noise data reads on "non-zero level of ambient noise"; inherently increasing the volume as evidenced by the fact that one of ordinary skill in the art would have recognized that the volume would have been increased based on the comparison result for the purpose of providing a speaker volume that is audibly discerned from the external noise.

(d) inherently maintains the volume of the speaker (112) at a level sufficient to overcome the external noise data for the duration of the speech call, which reads on claimed "maintaining the volume of the speaker at the level sufficient to overcome the sampled non-zero level of ambient noise for a predetermined period of time", as disclosed at column 3, lines 8-20 and exhibited in figure 3; wherein external noise data reads on "sampled non-zero level of ambient noise"; the duration of the speech call reads on "predetermined period of time"; and the volume is inherently maintaining based on that one of ordinary skill in the art would have recognized that during the period between the iterations of comparison between the sampled noise environment

and the threshold, the adjusted volume of the speaker will be maintained until the next iteration of the comparison process is performed.

In addition, Alperovich discloses wherein the adaptation learning feature allows the user to set the levels in the database (122), as disclosed at column 2, lines 65-66, however, Alperovich fails to disclose substantially zero ambient noise and resetting the volume to the initial volume level upon the call ending and before the establishment of a subsequent call. However, the examiner takes official notice of the fact that it was well know in the art to provide substantially zero ambient noise and resetting the volume to the initial volume level upon the call ending and before the establishment of a subsequent call.

Therefore, regarding substantially zero ambient noise it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Alperovich by specifically providing substantially zero ambient noise, for the purpose of providing an ideal comparison/reference point for adaptive volume control.

Regarding resetting the volume to the initial volume level upon the call ending and before the establishment of a subsequent call, Clancy discloses that in response to an end of call signal the automatic volume control is reset to zero gain, as disclosed at column 11, lines 42-65.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Alperovich by specifically providing resetting the volume to the initial volume level upon the call ending and before the establishment of a subsequent call, for the purpose of nullifying undesired skewing.

Regarding **claim 13**, Alperovich and well known prior art, the combination, discloses everything claimed as applied above (see claim 11), in addition Alperovich discloses wherein the communication device is a mobile station (100); which read on claimed "wherein the communication device is a mobile communications device"; as disclosed at column 2, lines 30-38 and exhibited in figure 1; wherein the mobile station (100) reads on "communication device".

Regarding **claim 14**, Alperovich and well known prior art, the combination, discloses everything claimed as applied above (see claim 13), in addition Alperovich discloses wherein the communication device is a mobile station (100); which read on claimed "wherein the communication device is a mobile telephone"; as disclosed at column 2, lines 30-38 and exhibited in figure 1; wherein the mobile station (100) reads on "communication device".

Regarding **claim 15**, Alperovich and well known prior art, the combination, discloses everything claimed as applied above (see claim 11), in addition Alperovich discloses periodically requesting measurements of the external noise data from the ENMD while the MS is in a speech call to provide the measurement report, application (120) then obtains the subscriber's desired volume control data from the database (122) in memory module (MM) (108) and compares the measured noise data to the desired volume and based on the comparison calculation the application (120) sends a control signal request to volume control (VC) device (104) to increase or decrease the volume of the MS (100); VC (104) then translates the request to a hardware operation to adjust the volume of speaker (112), which reads on the claimed "resampling the ambient noise

and adjusting the volume of the speaker in response to the level of the resampled ambient noise", as disclosed at column 3, lines 8-20; wherein periodically requesting reads on "resampling"; external noise data reads on "ambient noise"; adjusting the volume of speaker (112) reads on "adjusting the volume of the speaker"; and comparison calculation to application (120) sends a control signal request to the volume control device reads on "response to the level of the resampled ambient noise".

3. ***Claims 10, 16 and 25*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich in view of Kanai (United States Patent 6,233,462).

Regarding **claim 10**, Alperovich and Yamashita, the combination, disclose everything claimed as applied above (see claim 1), however, the combination fails to disclose resetting speaker volume to an initial setting. However the examiner maintains that it was well known in the art to reset speaker volume to an initial setting, as taught by Kanai.

In a similar field of endeavor Kanai discloses a portable terminal device for automatically controlling calling sound level. In addition, Kanai discloses when the speech is finished the loudspeaker (6) again returns to the standby status (S101), which reads on the claimed "resetting speaker volume to an initial setting", as disclosed at column 7, lines 34-44 and exhibited in figure 5; wherein returns reads on "resetting", standby status reads on "initial setting", and loudspeaker reads on "speaker volume".

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination by specifically providing

resetting speaker volume, for the purpose of using a noise level detection circuit for controlling the receiving voice level.

Regarding **claim 16**, Alperovich and Yamashita, the combination, disclose everything claimed as applied above (see claim 11), however, the combination fails to disclose resetting speaker volume to an initial setting. However the examiner maintains that it was well known in the art to reset speaker volume to an initial setting, as taught by Kanai.

In a similar field of endeavor Kanai discloses a portable terminal device for automatically controlling calling sound level. In addition, Kanai discloses when the speech is finished the loudspeaker (6) again returns to the standby status (S101), which reads on the claimed "resetting speaker volume to an initial setting", as disclosed at column 7, lines 34-44 and exhibited in figure 5; wherein returns reads on "resetting", standby status reads on "initial setting", and loudspeaker reads on "speaker volume".

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination by specifically providing resetting speaker volume, for the purpose of using a noise level detection circuit for controlling the receiving voice level.

Regarding **claim 25**, Alperovich and Yamashita, the combination, disclose everything claimed as applied above (see claim 24), however, the combination fails to disclose resetting speaker volume to an initial setting. However the examiner maintains that it was well known in the art to reset speaker volume to an initial setting, as taught by Kanai.

In a similar field of endeavor Kanai discloses a portable terminal device for automatically controlling calling sound level. In addition, Kanai discloses when the speech is finished the loudspeaker (6) again returns to the standby status (S101), which reads on the claimed "resetting speaker volume to an initial setting", as disclosed at column 7, lines 34-44 and exhibited in figure 5; wherein returns reads on "resetting", standby status reads on "initial setting", and loudspeaker reads on "speaker volume".

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination by specifically providing resetting speaker volume, for the purpose of using a noise level detection circuit for controlling the receiving voice level.

4. ***Claims 18, 19, and 21-24*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich, Yamashita in view of Clancy.

Regarding **claim 18**, Alperovich discloses a mobile station (100), as disclosed at column 2, lines 31-37 and exhibited in figure 1, which reads on claimed "mobile communications device", comprising: an inherent display screen, a speaker (112), a mouthpiece housed in MS (100), as disclosed at column 2, lines 40-44 and exhibited in figure 1, wherein a display screen is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that a display screen would have been provided for the purpose of viewing the menu for controlling the functions of the mobile station; mouthpiece reads on "microphone", and mobile station reads on "body";

volume control apparatus (120) and ENMD (102) for adjusting a volume level of the speaker (112) in response to external noise data; which reads on claimed "means

for adjusting a volume level of the speaker in response to ambient noise", as disclosed at column 3, lines 10-20 and exhibited in figure 3; wherein volume control apparatus and ENMD read on "means for adjusting volume" and external noise data reads on "ambient noise";

wherein the volume control apparatus (120) and ENMD are operable to sample the external noise data, determine the relationship between the sampled external noise data and a subscriber desired volume control data, and automatically cause the volume of the speaker (112) to increase or decrease to a level sufficient to overcome the sampled ambient noise, which reads on claimed "wherein the means for adjusting is operable to sample the ambient noise, and the volume control apparatus sends a control signal to automatically cause the volume of the speaker to increase to a level sufficient to overcome the sampled ambient noise" as disclosed at column 3, lines 7-20 and exhibited in figure 3; wherein the volume control apparatus and the ENMD reads on "means for adjusting", subscriber desired volume control data reads on "threshold" and external noise data reads on "ambient noise" however, Alperovich fails to disclose determining greater than a threshold and provide means for receiving user input to activate and deactivate the means for adjusting independently of powering on and off the mobile communications device. However, the examiner maintains that it was well known in the art for determining greater than a threshold and provide means for receiving user input to activate and deactivate the means for adjusting independently of powering on and off the mobile communications device, as taught by Yamashita and Clancy respectively.

Regarding the greater that a threshold, Yamashita discloses the a level detector that provide an indication of the signal level of the microphone input signal and is compared to the reference noise level to determine whether the signal level is greater than the reference noise set level, which reads on the claimed "determining greater than a threshold" as disclosed at column 4, lines 3-8 and exhibited in figure 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of automatic volume control of Alperovich by specifically providing a step of determining greater than a threshold, as taught by Yamashita, for the purpose of providing indication as to the results of the comparison.

Regarding providing means for receiving user input to activate and deactivate the means for adjusting independently of powering on and off the mobile communications device Clancy discloses the capability to disable the automatic volume function as controlled by the user, as disclosed at column 8, lines 62-68.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of automatic volume control of Alperovich by specifically providing means for receiving user input to activate and deactivate the means for adjusting independently of powering on and off the mobile communications device, as taught by Clancy, for the purpose of nullifying skewing.

Regarding **claim 19**, Alperovich, Yamashita and Clancy disclose everything claimed as applied above (see claim 18), in addition Alperovich discloses wherein ENMD (102) measures external noise via a separate microphone (114), which reads on

claimed "second microphone, wherein the second microphone samples the ambient noise", as disclosed at column 2, lines 41-44; column 3, lines 10-20 and exhibited in figures 1 and 3; wherein external noise reads on "ambient noise" and separate microphone (114) reads on "second microphone samples".

Regarding **claim 20**, Alperovich, Yamashita and Clancy disclose everything claimed as applied above (see claim 18), in addition a cellular telephone inherently comprises a display screen with option to select functions. Further the combination discloses the means for receiving user input to activate and deactivate the means for adjusting independently of powering on and off the mobile communications device thus the interface to control the function is included in the display.

Regarding **claim 21**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 18), in addition Alperovich discloses wherein every mobile telephone has the capability to be turned on and off. The invention described in Alperovich is enabled when the mobile telephone is turned on the volume control apparatus is also turned on, which reads on claimed "button operable to enable means for adjusting"; wherein the On/Off button reads on "button" and volume control apparatus reads on "means for adjusting".

Regarding **claim 22**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 18), in addition Alperovich discloses wherein the volume control application (120) sends a request to volume control (104) to decrease the volume of MS (100), this request is translated into to a request for the hardware operation to adjust the volume of speaker (112); which reads on claimed "means for

adjusting is operable to cause volume of the speaker to decrease", as disclosed at column 3, lines 16-20 and exhibited in figure 3, wherein volume control apparatus reads on "means for adjusting".

Regarding **claim 23**, Alperovich and Yamashita disclose everything claimed as applied above (see claim 18), in addition Alperovich discloses periodically requesting measurements of the external noise data from ENMD (102) while the MS (100) is in a speech call, ENMD (102) will then provide the measurement report volume control application (120) to adjust the volume of the speaker 112; which reads on claimed "means for adjusting periodically samples the ambient noise", as disclosed at column 3, lines 9-20 and exhibited in figure 3, wherein volume control apparatus reads on "means for adjusting" and external noise reads on "ambient noise".

Regarding **claim 24**, Alperovich and Yamashita discloses everything claimed as applied above (see claim 18), in addition Alperovich discloses wherein the subscriber makes a manual adjustment to the volume and the external noise is measured. These two settings are entered into the database (122) of the volume control apparatus (120) as a preferred volume level for the receiving signal, which reads on the claimed "means for adjusting is operable to set an initial volume level for the speaker", as disclosed at column 2, line 66 through column 3, line 20; wherein the volume control apparatus reads on "means for adjusting" and preferred volume level reads on set an initial volume level for the speaker".

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F Harold whose telephone number is 703-306-5836. The examiner can normally be reached on Monday - Friday 9 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jefferey F Harold
Examiner
Art Unit 2644

JFH
December 10, 2004

FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER